

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Patricia Wei Yin Chiang et al.
Application No. : 10/500,453
Filed : March 10, 2005
For : VIDEO ENCODING

Examiner : Jessica Marie Prince
Art Unit : 2485
Docket No. : 851663.473USPC
Date : February 14, 2012

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPELLANT'S REPLY BRIEF

Commissioner for Patents:

This brief is in furtherance of the Notice of Appeal, filed for this application on May 17, 2011, and the Appeal Brief filed on September 9, 2011. This brief also is in response to the final Office Action for this application mailed February 17, 2011, and the Examiner's Answer mailed on December 14, 2011.

I. STATUS OF CLAIMS

Claims 5-7, 10-16, 25-26, and 30-46 are currently pending. Pending claims 5-7, 10-16, 25-26, and 30-33 are allowed. The currently pending claims 34-46 are rejected. The rejections of the non-allowed claims 34-46 are being appealed.

II. GROUND OF REJECTION TO BE REVIEWED ON APPEAL

Claims 34, 36, 37, 39 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al., Target Bit Matching for MPEG-2 Video Rate Control in view of Pullen et al., US 5,923,376.

Claims 35, 42 and 44-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al., Target Bit Matching for MPEG-2 Video Rate Control, in view of Pullen et al., US 5,923,376, in view of Oikawa et al., US 5,677,734.

Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al., Target Bit Matching for MPEG-2 Video Rate Control, in view of Pullen et al., US 5,923,376 in view of Wu et al., US 6,974,378.

Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al., Target Bit Matching for MPEG-2 Video Rate Control, in view of Pullen et al., US 5,923,376, in view of Boice et al., US 5,644,504.

Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al., Target Bit Matching for MPEG-2 Video Rate Control in view of Pullen et al., US 5,923,376, in view of Oikawa et al., US 5,677,734, and in view of Wu et al., US 6,974,378.

III. ARGUMENT

After reviewing the Examiner's Answer, Applicants continue to disagree with the Examiner on all accounts. In particular, Applicants continue to disagree with the Examiner that Lee discloses all the elements of independent claims 34 and 42 that the Examiner alleges. For example, independent claim 34 is directed to determining a relationship between first metric values and respective quantities of encoded video data based on a reference video including a plurality of macroblocks. This determined relationship is later used as part of selecting an encoding parameter for encoding video data of an input video, where the input video includes a plurality of macroblocks distinct from the plurality of macroblocks of the reference video. Conversely, Lee describes a bit rate control algorithm that determines quantization parameters for a current macroblock based on a previous macroblock of the *same* video (i.e., of the *same* plurality of macroblocks) that is being encoded.

Generally, in the Examiner's Answer, the Examiner admits Lee does not explicitly disclose receiving an input video that is distinct from a reference video, but argues in the "Response to Argument" section on page 22 of the Examiner's Answer that it is obvious that Lee receives an input video that is distinct from reference video because "the video [of Lee] includes a plurality of video data; reference and non-reference. Applicants disagree. Other than providing this somewhat circular argument, the Examiner is incorrect. Even if the video of Lee does include reference and non-reference video (which it does not), there is no distinction in Lee between any reference and non-reference video streams, let alone "a plurality of macroblocks" distinct from the "plurality of macroblocks" of the reference video, as recited in claim 34. In essence the Examiner is arguing that the single video stream of Lee includes "an input video, the input video including a plurality of macroblocks distinct from the plurality of macroblocks of the reference video," as recited in claim 34. This is simply incorrect as what the Examiner refers to "reference video" and "input video" of Lee is the same single video stream (i.e., the same plurality of continuous macroblocks) of Lee.

Again, the Examiner is mistakenly confusing the "reference macroblock" of Lee with the "reference video" of claim 34, which includes a plurality of macroblocks. The Examiner explains in detail how Lee is deemed to use information (such as a scaling factor)

regarding a previous macroblock to encode a current macroblock. However, such information is irrelevant to the claimed invention because a reference macroblock cannot include a plurality of macroblocks, and thus, cannot be the reference video recited in claim 34.

In addition, regarding the additional reasons dependent claim 36 is nonobvious, claim 36 recites "...wherein the receiving the input video occurs after the calibration process is performed" (the calibration process being performed based on the encoded distinct reference video). Given the Examiner's interpretation of the reference video of Lee being the same video stream as the input video of Lee, it is impossible for Lee to teach or suggest this element since the single video stream of Lee cannot be received after itself.

Summary

For the reasons stated in the Appeal Brief and above, all of the pending claims are patentable over the references relied on by the Examiner. Accordingly, Appellant requests that the rejections of the pending claims from the final Office Action mailed February 17, 2011, be reversed, and that all the pending claims be found to recite patentable subject matter.

Respectfully submitted,

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